## We claim:

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A method of inducing weight loss in a mammal comprising administering a ciliary neurotrophic factor protein to either the nasal or the respiratory passages of said mammal.

- 2. The method of claim 1, wherein the mammal is a human.
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- 3. The method of claim 2, wherein said method is for the treatment of diet induced obesity or obesity of a genetically determined origin.
- 4. The method of claim 2, wherein said ciliary neurotrophic factor protein is AX-15.
- 5. The method of claim 2, wherein said ciliary neurotrophic factor protein is AX-2.
- 6. A method of preventing the occurrence of gestational or adult onset diabetes in a human comprising administering a ciliary neurotrophic factor protein to either the nasal or the respiratory passages of said human
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- 7. A method of treating gestational or adult onset diabetes in a human comprising administering a ciliary neurotrophic factor protein to either the nasal or the respiratory passages of said human.
- 8. The method according to any one of claims 1 to 7, wherein said ciliary neurotrophic factor protein is pegylated.
- 9. The method according to any one of claims 1 to 7, wherein said ciliary neurotrophic factor protein is administered intranasally.

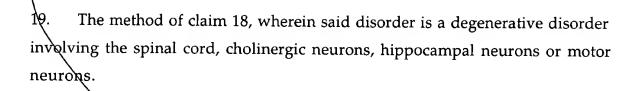
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- 10. The method according to any one of claims 1 to 7, wherein said ciliary neurotrophic factor protein is administered intratracheally.
- 11. The method according to any one of claims 1 to 7, wherein said ciliary neurotrophic factor protein is administered by use of a nebulizer.

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- 12. The method according to claim 6 or 7, wherein said ciliary neurotrophic factor protein is AX-15.
- 13. The method according to claim 6 or 7, wherein said ciliary neurotrophic factor protein is AX-2.
- 14. A composition useful for the treatment of obesity or gestational or adult onset diabetes in a mammal comprising a formulation of a ciliary neurotrophic factor protein suitable for intranasal administration.
- 15. A composition useful for the treatment of obesity or gestational or adultonset diabetes comprising a formulation of a ciliary neurotrophic factor protein suitable for be administered by a nebulizer to a mammal.
- 16. The composition according to claim \( \frac{1}{2} \) or 15, wherein said ciliary neurotrophic factor protein is AX-15.
- 25 17. The composition according to claim 14 or 15, wherein said ciliary neurotrophic factor protein is AX-13.
  - 18. A method of treating a disorder responsive to ciliary neurotrophic factor in a patient, comprising administering said ciliary neurotrophic factor to either the nasal or respiratory passages of said patient.

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- 20. A method of treating a disorder responsive to ciliary neurotrophic factor in a patient, comprising administering said ciliary neurotrophic factor to either the eye or oral passages of said patient.
- 10 21. The method of claim 20, wherein said disorder is obesity or adult onset or gestational diabetes.
  - 22. The method of claim 18 or 20, wherein said ciliary neurotrophic factor is pegylated.